

explain the method by which the costs identified under each one were derived.<sup>398</sup>

ii. Discussion

233. Eight LECs develop direct costs under the security installation function. Based on our review of the direct cases of these eight LECs, we find that five LECs develop direct costs for a card access system and the remaining three LECs use other security systems. We also conclude that the security installation direct costs of the five LECs that provide for security with a card access system are generally higher than the three that develop security installation costs without a card access system. The average of the security installation direct costs for those LECs that use a card access system is \$183 per month. The average of the security installation direct costs for those LECs that do not develop direct costs for a card access system is \$58 per month.

234. We believe that, because card access systems apparently are correlated with high security installation direct costs, providing security through the use of card access systems is fundamentally different from providing security through other types of security installations. We therefore analyze the security installation direct costs of the LECs that use a card access system separately from the security installation direct costs of those LECs that used other security systems. Although we believe that LECs should have the flexibility to choose their security system, the security system they use must be tariffed based on the properly calculated economic cost of the system.

235. Security Installation Direct Costs for LECs with Card Access Systems. We find that the security installation direct costs for a number of Pacific's central offices, GTOC's Main and West central offices in Plano, Texas, and SWB's medium-size central offices are unjust and unreasonable because the costs of these LECs exceed the industry average plus one standard deviation and these LECs fail to provide adequate cost support for this function. Accordingly, Pacific, GTOC, and SWB are required to recalculate their rates for these central offices to reflect the security direct cost disallowances explained below.

236. By our calculations, the overall LEC average for the security installation direct cost function for the five LECs that provide security with card access systems is \$183 per month. The standard deviation of these direct costs relative to that average is \$118 per month. The average plus one standard deviation is \$300 per month.<sup>399</sup>

237. Pacific's Security Installation Direct Costs. Pacific's security installation direct costs for its highest-priced central office are \$380 per month. Moreover, Pacific's security installation direct costs for some central offices are less than those of its highest-

---

<sup>398</sup> *Id.* at 6912.

<sup>399</sup> No LEC derives a security installation direct cost estimate that is above or below two standard deviations of the average.

priced central office, \$380, but still in excess of the LEC average security installation direct cost plus one standard deviation, \$300. Furthermore, Pacific's security installation direct costs for a number of other central offices are in excess of Pacific's security installation direct cost for its highest-priced central office. We find that the direct costs for all of these central offices are unreasonable because those costs exceed the average, plus one standard deviation and, Pacific fails to justify these high direct costs.

238. Pacific fails to justify its high direct costs for the security installation function because the company merely lists estimates of the investment value of the security equipment required at various central offices as a result of physical collocation.<sup>400</sup> Moreover, Pacific does not make any attempt to disaggregate the investment into the various pieces or categories of equipment or facilities that comprise the whole security system or to provide any cost support or other justification for those pieces of investment. In addition, Pacific's statement that it develops these estimates on the basis of current vendor information is inadequate because Pacific provides no details on the methodology by which it derives these estimates.<sup>401</sup> Furthermore, Pacific relies upon a 1992 company study to justify the annual maintenance cost factor it uses to develop the recurring security installation direct costs, but files no copy of that study or the pertinent details of that study in the record.<sup>402</sup>

239. Accordingly, we order Pacific to recalculate its rates for its overall highest-priced central office to exclude direct costs in excess of the average plus one standard deviation, \$300 per month, and to calculate appropriate refunds for unreasonable security charges imposed upon interconnectors. We also order Pacific to recalculate its rates for other central offices that have direct costs greater than the LEC average plus one standard deviation, but less than or equal to direct costs of its highest priced central offices.<sup>403</sup> For these central offices, Pacific should also exclude direct costs that exceed one standard deviation above the average. In the event that elsewhere in this Order we make any disallowances to Pacific's direct costs for other reasons that affect the level of its security installation direct costs, \$300 per month is the maximum permissible security installation direct cost for these central offices, and the full amount of those other disallowances must be reflected in Pacific's recalculation of its direct costs, even when the result of those other disallowances would bring Pacific's security installation direct costs below \$300 for these central offices.

240. As explained in Section III.C.2.c.v above, when the security installation direct costs of Pacific's other central offices exceed \$380, Pacific's security installation direct costs for its highest priced central office, we are not prescribing \$300 per month as the maximum

---

<sup>400</sup> Pacific Direct Case, Appendix M, M.67.

<sup>401</sup> Pacific Direct Case at 33.

<sup>402</sup> *Id.* at 20, Appendix M, M.15-M.66.

<sup>403</sup> See Section III.C.2.c.v *supra*.

permitted cost. Instead, when the security installation direct costs of Pacific's other central offices exceed \$380, we require Pacific to reduce its security installation direct costs by 21 percent. We are disallowing 21 percent of Pacific's security installation direct costs in such cases because 21 percent is the amount by which we are disallowing Pacific's security installation direct costs for its highest priced central office.<sup>404</sup> We adopt this approach because when a LEC develops separate direct costs for different central offices, it is likely to use the same methodology to calculate costs and any bias in direct costs for central offices that are not the LEC's highest priced central office is likely to be in the same direction and of the same relative magnitude as in the direct costs for that LEC's highest-priced central office.<sup>405</sup> Making a percentage disallowance, therefore, ensures that a LEC's direct costs for a given function reasonably reflect the central tendency of the industry's costs, while recognizing that there may exist legitimate direct cost differences for that function among the LEC's central offices.

241. In the event that elsewhere in this Order we make any disallowances to the direct costs of Pacific, for other reasons that affect the level of Pacific's floor space direct costs, the statistical disallowance we make in this section of the Order establishes the maximum permitted floor space direct cost for Pacific, and the full amount of those other disallowances must be reflected in the recalculated rates even when the result of those other disallowances is to further decrease Pacific's security installation direct costs for central offices with security installation direct costs that exceed \$380.

242. Security Installation Direct Costs of GTOC and SWB. GTOC's security installation direct costs for its highest-priced central office are \$200 per month and these costs do not exceed the average direct cost for this function plus one standard deviation, \$300 per month. The direct costs for GTOC's Main and West central offices in Plano, Texas, however, are \$375 per month, and these costs exceed that average plus one standard deviation. SWB's large central offices are its highest-priced central offices and the security installation direct costs for these central offices are \$114 per month, an amount less than the direct cost average for this function plus one standard deviation. The direct costs for SWB's medium-size central offices are, however, \$331 per month, and these costs exceed that average plus one standard deviation. We find that the security installation direct costs for GTOC's Main and West central offices in Plano, Texas and those for SWB's medium-size central offices are unreasonable because these costs exceed the average plus one standard deviation and, as explained below, GTOC and SWB fail to justify their high direct costs for this function.

243. GTOC does not justify its high security installation direct costs because it merely states that its engineers develop these costs based on their experience with the building modifications needed to install a central office security system. GTOC does not explain the methodology by which these engineers develop these costs or provide workpapers showing the

---

<sup>404</sup> See *id.*

<sup>405</sup> See *id.*

calculations that underlie these costs.<sup>406</sup> Moreover, GTOC asserts that it calculates security installation costs for simple, moderate, and complex offices without describing how its central offices differ among these three categories or explaining why these costs differ among these categories.<sup>407</sup> GTOC also asserts that it assumed a 60/40 split between material and labor in developing base security installation direct costs, but does not quantify separately the material costs associated with any of the components that comprise its security system, identify the particular labor activities needed to install this system, or quantify the corresponding number of labor hours needed for these activities.<sup>408</sup> In addition, although GTOC explains that its security installation costs are averages that it calculates using a sample of central offices, GTOC does not provide specific cost data for the particular central offices within that sample.<sup>409</sup> Furthermore, GTOC states that it adjusted its base security installation costs geographically to reflect average differences in material and labor costs; it does not, however, explain the data, assumptions, or methodology on which the adjustment is based or quantify the magnitude of this adjustment for the security installation direct costs of any central office.<sup>410</sup>

244. SWB does not justify its high security installation direct costs because SWB simply lists these costs on its security installation TRP chart for small, medium, and large central offices without providing supporting data or workpapers showing the calculations that underlie these costs.<sup>411</sup> SWB states that its security system is an encoded card access system that records who enters and leaves the central office, but fails to identify any of the components that comprise that system or the separate costs of those components.<sup>412</sup> Although SWB explains its general cost estimating methodology for building construction, it does not explain adequately how it applies that general methodology to estimate security installation costs in particular.<sup>413</sup> SWB does not, for example, identify specifically the quantities of construction work associated with security system installation or the unit costs of construction elements needed in the construction work. In addition, SWB does not explain whether it develops the unit costs of the construction elements for security installation by using published indexes of construction costs, such as R. S. Means' indexes, costs on previous

---

<sup>406</sup> GTE Direct Case, Attachment 1 at 20.

<sup>407</sup> *Id.*

<sup>408</sup> *Id.*

<sup>409</sup> *Id.*

<sup>410</sup> *Id.*

<sup>411</sup> SWB Direct Case, Appendix 3, Exhibit A at 1-2; Appendix 3, Exhibit B at 1-2; and TRP charts for the security installation function.

<sup>412</sup> SWB Direct Case at 21, Appendix 3, Exhibit B at 1-2.

<sup>413</sup> SWB Direct Case, Appendix 3, Exhibit A at 1-2.

projects, or information from sub-contractors or suppliers. SWB also fails to document its use of these data with supporting workpapers showing the development of these costs. Moreover, SWB does not quantify the extent to which the base cost for security system installation is marked-up for the overhead and profit margin of the general contractor installing that system or identify the amount of the general contractor's miscellaneous costs such as charges for building permits, temporary utilities, and insurance. Finally, SWB fails to identify the amount of the various miscellaneous telephone company costs that it adds to the general contractor's construction costs such as those for the project management time of the telephone company project engineer or architect, and for any non-telephone company architect, engineer, or other consultants or representatives.<sup>414</sup>

245. Accordingly, we disallow the security installation direct costs for GTOC's Main and West central offices in Plano, Texas and those for SWB's medium-size central offices to the extent that they exceed \$300 per month. We order GTOC and SWB to recalculate their rates to reflect these disallowances and to calculate the appropriate refunds based on the difference between the allowable direct cost of \$300 and the higher direct costs that they imposed on their interconnector-customers. If elsewhere in this Order we make any disallowances to the direct costs of these LECs for other reasons that affect the level of the security installation direct costs, \$300 is the maximum permissible level for the security installation direct costs and the full amount of any other disallowances must be reflected in the recalculated rates even when the result of those other disallowances would bring their security installation direct costs below \$300.

246. Security Installation Direct Costs for LECs Without Card Access Systems. We find that the LECs that do not provide security with a card access system are those with relatively low security installation direct costs. These LECs are Ameritech, Lincoln, and Nevada, and their security installation direct costs are \$144, \$21 and \$10 per month, respectively. As stated above, the average security direct costs for LECs that use a card access system is \$183. Because the security direct costs of LECs that do not have a card access system are low compared to LECs with a card access system, we make no statistical disallowance to the direct costs of LECs that provide security without a card access system.

247. Direct Costs of Security Escorts. We also analyze the direct costs LECs identify under the active security function. These direct costs are primarily the direct costs attributable to security escorts.<sup>415</sup> All LECs require an escort under certain circumstances; only five, however, develop the direct costs for those escorts. We analyze the security escort direct costs of these five LECs.

---

<sup>414</sup> *Id.*

<sup>415</sup> Pacific is the only LEC that derives direct costs under the active security function that includes costs other than for a security escort. Pacific determines that the direct cost for a new access card is \$8.70 and the direct cost for a replacement access card is \$22.20, and categorizes these costs under the active security function. We find that these direct costs are not unreasonably high.

248. We calculate the average and the standard deviation relative to that average for the sample of five companies that develop security escort direct costs. By our calculations, the overall LEC average for security escort direct costs for this group of LECs is \$40 per hour. The standard deviation of these direct costs relative to that average is \$41 per hour. The average plus one standard deviation is \$80 per month.<sup>416</sup> Nevada's security escort direct costs for all of its central offices are \$107 per hour.<sup>417</sup>

249. We find that Nevada's security escort direct costs are unjust and unreasonable because these costs exceed the industry average plus one standard deviation and Nevada fails to justify its high direct costs for this function. Accordingly, Nevada is required to establish rates that reflect security escort direct costs that do not exceed one standard deviation above the average security escort direct costs.

250. In its direct case, Nevada fails to justify direct costs that exceed the average plus one standard deviation for its security escort service function because it only discusses the conditions under which a security escort by an engineer or a technician is required<sup>418</sup> and lists the labor rate for different job titles and labor functions in an attachment.<sup>419</sup> Nevada does not specifically identify any of these job titles or labor functions as a security escort. Although Nevada indicates that the labor rates reflect wages plus benefits plus loadings,<sup>420</sup> Nevada does not describe the loadings in detail or indicate the portion of the labor rates attributable to loadings as all LECs were required to do in the *Designation Order*.<sup>421</sup>

251. Accordingly, we disallow the amount of its direct costs that is in excess of \$80 per hour. We order Nevada to recalculate its security escort rates to reflect these disallowances and to calculate appropriate refunds based on the difference between the allowable direct cost of \$80 per hour and the direct costs that it recovered from its interconnector-customers. In the event that elsewhere in this Order we make any disallowances to Nevada's direct costs for other reasons that affect the level of its security escort direct costs, \$80 per hour is the maximum permissible level for the security escort direct costs and the full amount of those other disallowances must be reflected in the recalculated rates even when the results of those other disallowances would bring Nevada's

---

<sup>416</sup> No LEC derives a security installation direct cost estimate that is above or below two standard deviations of the average.

<sup>417</sup> Nevada determines that its direct cost for escort by an engineer and a technician are \$124.46 and \$88.71 per hour, respectively. We use the average of these two direct costs, \$106.59, in our analysis.

<sup>418</sup> Nevada Direct Case at 9.

<sup>419</sup> Nevada Direct Case, Appendix C.

<sup>420</sup> *Id.* at 3.

<sup>421</sup> *Designation Order*, 8 FCC Rcd at 6913.

security installation direct costs below \$80.

252. Only Nevada, SWB, US West, Lincoln, and Central tariff a rate for a security escort, although all LECs require a security escort under some circumstances. We require LECs that do not develop a tariffed rate for a security escort - Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific, GTOC, Rochester, CBT, and SNET - to refund monies to the interconnectors to the extent that these LECs provided a security escort for physical collocation service during the relevant time period at a rate that recovered direct costs in excess of \$80. In calculating that refund, LECs' direct costs are to be calculated based on the actual rate that the LEC charged to the interconnector for the escort, less the overhead that we are prescribing for the LEC in this Order. In addition, we are ordering any LEC that is currently providing tariffed interstate physical collocation service and imposing a rate on the interconnector for a security escort to file a tariff for the rate with cost data to justify that rate.

h. Construction Costs

i. Background

253. Central office construction involves preparation of the central office space for physical collocation and construction of the interconnectors' cages. The Bureau's TRP charts set forth in the *Designation Order* were designed to disaggregate central office construction into three functions -- Interconnector-Specific Construction, Common Construction and Construction Provisioning -- because LECs' use of different rate structures makes it difficult to determine precisely which construction costs are associated with particular rate elements.<sup>422</sup> The Bureau asked the LECs to provide TRP data on the investments, expenses and taxes for these three functions in their direct cases and to explain the method by which the costs identified under each one were derived.

ii. Discussion

254. We find that the construction direct costs for some of Pacific's central offices, all of NYNEX's central offices, and CBT's area III central offices are unjust and unreasonable because these direct costs exceed one standard deviation above the average construction direct costs and these LECs fail to justify their high direct costs for this function. Accordingly, these LECs are required to calculate rates that reflect the construction direct cost disallowances explained below. In addition, Pacific and NYNEX are required to tariff these rates,<sup>423</sup> and Pacific, NYNEX, and CBT must provide refunds to their interconnector-customers based on these construction direct cost disallowances.

---

<sup>422</sup> *Id.* at 6911.

<sup>423</sup> CBT is not required to tariff rates that reflect the construction disallowance because it no longer offers physical collocation service.

255. We adjust the data that we are using to determine the industry average construction cost. We remove Bell Atlantic, Rochester, Lincoln, and Central from the database we use for this calculation. These LECs charge their interconnector-customers for the costs of the labor and the materials that are actually used for the common construction at a particular central office for a particular interconnector.<sup>424</sup> This method of recovering costs is fundamentally different from the conventional tariff method of cost recovery the other LECs use. The other LECs file a rate designed to recover the average cost calculated for a sample of central offices drawn from a broad geographic area. Although LECs that assess charges on a time and materials basis provide estimates of their direct construction costs, we do not use these estimates for our analysis in this Order because they are not tariffed rates.

256. After making these adjustments to the data base,<sup>425</sup> we find that the overall LEC average for the direct costs of construction is \$702 per month. The standard deviation relative to that average is \$423 per month. The average plus one standard deviation is \$1,125 per month.

257. Pacific's construction direct costs are \$1,257 per month for its highest-priced central office, NYNEX's construction direct costs for each of its central offices are \$1,200 per month, and CBT's construction direct costs for its area III central offices are \$1,251.<sup>426</sup> In addition, Pacific's construction direct costs for some of its other central offices are less than those of its highest-priced central office, but higher than the LEC average construction direct cost plus one standard deviation. These construction direct costs for Pacific, NYNEX, and CBT are unjust and unreasonable because they exceed the overall LEC average construction direct cost plus one standard deviation and, as explained below, these LECs fail to justify

---

<sup>424</sup> United also proposes to charge each of its interconnector-customers for the costs of the labor and the materials that are actually used for the common construction at a particular central office for that interconnector, but we remove United from the data base for all functions because it never had a physical collocation customer at any of its central offices. Lincoln imposes an advance payment of \$7,500 on the interconnector for construction and entrance facility installation costs. Lincoln partitions this rate between the construction provisioning function and the entrance facility installation function on its TRP charts. We regard Lincoln's approach to recovering the construction and entrance facility installation costs of physical collocation as the equivalent of a time and materials approach because Lincoln bills the interconnector for additional costs if total construction and entrance facility installation costs are greater than Lincoln's required \$7,500 advance payment and refunds money to the interconnector if the total construction and entrance facility installation costs are less than \$7,500. The interconnector pays for the actual labor time and the actual materials used for construction and entrance facility installation rather than paying an average cost based rate imposed on all interconnectors at a particular central office or set of central offices in a geographical area that may be greater or less than the cost of the actual labor time and the actual materials used.

<sup>425</sup> After removing Bell Atlantic, Rochester, Lincoln and Central from the construction direct cost data base, LECs remaining in the data base are Ameritech, BellSouth, CBT, GTOC, Nevada Bell, NYNEX, SNET, SWB, and US West.

<sup>426</sup> CBT's construction direct costs for its highest-priced central offices (CBT's area II central offices) are \$1,104. This dollar amount that does not exceed the average direct cost for this function plus one standard deviation.

these high direct costs.

258. Pacific fails to justify construction direct costs that exceed the average plus one standard deviation because the company merely provides a general discussion of the investments and the labor required for the construction provisioning, common construction, and the interconnector-specific construction functions<sup>427</sup> and workpapers listing the costs for these functions.<sup>428</sup> Although Pacific states that labor hours are developed by Pacific's subject matter "experts"<sup>429</sup> and that unit costs are developed from current vendor information,<sup>430</sup> Pacific submits no specific information on the data, assumptions and the methodology it uses to develop these construction costs. Pacific refers to a 1992 company study to support its annual maintenance cost factor<sup>431</sup> and a 1990 study to support its labor rates,<sup>432</sup> but does not file copies of these studies or explain how these studies support its construction direct costs.

259. NYNEX offers a brief explanation of the tasks associated with construction and asserts that the average nonrecurring cost of providing a 100 square foot multiplexing node is \$54,878.<sup>433</sup> NYNEX states that its calculations appear in WS-4 of Transmittal 165, but that transmittal merely lists costs with no explanation.<sup>434</sup>

260. CBT briefly explains that its consulting engineer derives common construction costs based on a representative wire center selected from within a major, a large, and a medium group of wire centers<sup>435</sup> and disaggregates these construction costs into different cost subcategories for each representative wire center.<sup>436</sup> CBT does not, however, provide the consulting engineer's study or explain the methodology, assumptions, or the data its engineer uses to derive these construction costs.

---

<sup>427</sup> Pacific Direct Case at 5-9, 23-24, and 26-29.

<sup>428</sup> Pacific Direct Case, Appendix C, D, and E.

<sup>429</sup> Pacific Direct Case at 24

<sup>430</sup> *Id.* at 5-9.

<sup>431</sup> Pacific Direct Case, Appendix C at C.15-C.66, Appendix E at E.3-E.4,

<sup>432</sup> Pacific Direct Case, Appendix D at D.3-D.4.

<sup>433</sup> NYNEX Direct Case, Appendix A at 6.

<sup>434</sup> NYNEX Direct Case, Attachment E.

<sup>435</sup> CBT Direct Case, Exhibit A at 5-6. In its direct case, CBT does not define major, large, or medium wire center. *Id.*

<sup>436</sup> CBT Direct Case, Tab 2, Appendix 3.

261. Accordingly, we disallow the construction direct costs of Pacific's highest-priced central office and its other central offices with direct construction costs that are less than those of its highest-priced central office (central office SCRM01) but that exceed the LEC average construction direct cost plus one standard deviation, to the extent that they exceed \$1,125 per month, one standard deviation above the average. We also disallow NYNEX's direct construction costs to the extent they exceed \$1,125 per month. Finally, we disallow CBT's construction direct costs for its area III central offices to the extent that these direct costs exceed \$1,125 per month. We order Pacific, NYNEX, and CBT to recalculate their rates to reflect these direct cost disallowances and to calculate the appropriate refunds based on the difference between the maximum allowable direct cost of \$1,125 and the direct cost that they recovered in the rates that they imposed on their interconnector-customers. In the event that elsewhere in this Order we make disallowances to the direct costs of these LECs for other reasons that affect the level of their construction direct costs, \$1,125 per month is the maximum permissible level for their direct construction costs, and the full amount of any other disallowances must be reflected in the recalculated rates even when the result of those other disallowances would bring their direct construction costs below \$1,125.

262. Pacific's construction direct costs for central office LAMS01 are \$1,273 per month, an amount exceeding both the average plus one standard deviation (\$1,125 per month) and the costs for Pacific's overall highest priced central office (\$1,257 per month).<sup>437</sup> We therefore find that Pacific's direct construction costs for central office LAMS01 are unjust and unreasonable because, as already explained, Pacific fails to provide adequate cost support for construction in its central offices. We disallow 11 percent (\$134 per month) of these direct costs because 11 percent is the size of the disallowance that we make to Pacific's construction direct costs for its highest-priced central office, SCRM01. As explained in Section III.C.2.c.v above, we are not reducing Pacific's direct costs for this central office to the average plus one standard deviation because we believe that when a LEC develops different costs for different central offices, it is likely to use the same methodology to calculate costs and any bias in direct costs for central offices that are not the LEC's highest price central office is likely to be in the same direction and of the same relative magnitude as in the direct costs for that LEC's highest price central office.<sup>438</sup> Making a percentage disallowance, therefore, ensures that a LEC's direct costs for a given function reasonably reflect the central tendency of the industry's costs, while recognizing that there may exist legitimate direct cost differences for that function among the LEC's central offices.

263. We order Pacific to recalculate its rates for central office LAMS01 to reflect this direct cost disallowance and to calculate the refunds based on the difference between the

---

<sup>437</sup> We use Pacific's direct costs for central office SCRM01 in constructing the database because Pacific's overall price for this central office is the highest of any for which physical collocation rates were in effect as of April 15, 1994. See Data Request Response from Jo Ann Goddard, Director, Federal Regulatory Relations, Pacific to Gregory J. Vogt, Chief, Tariff Division, FCC (dated April 28, 1994).

<sup>438</sup> See Section III.C.2.c.v *supra*.

maximum allowable direct cost of \$1,139 and the direct cost that it recovered in the rates that it imposed on its interconnector-customers. In the event that elsewhere in this Order we make any disallowances to Pacific's direct costs for other reasons that affect the level of its construction direct costs, \$1,139 per month is the maximum permissible level for its direct construction costs for central office LAMS01 and the full amount of any other disallowances must be reflected in how Pacific recalculates its rates, even if the effect of those other disallowances would bring Pacific's direct construction costs below \$1,139.

i. Entrance Facility Costs

i. Background

264. Entrance facility installation involves installation of an interconnection arrangement from the manhole to the interconnector's space. Entrance facilities are the physical assets used to support the interconnection arrangement from the manhole to the interconnector's space, including the manhole, conduit, vault, cable rack, and riser duct. The Bureau's TRP charts set forth in the *Designation Order* were designed to disaggregate entrance facility costs into two functions -- Entrance Facility Installation, and Entrance Facility Space -- because LECs' use of different rate structures make it difficult to determine precisely which entrance costs are associated with particular rate elements.<sup>439</sup> The Bureau asked the LECs to provide TRP data on the investments, expenses and taxes for these two functions in their direct cases and to explain the method by which they derived the costs identified under each function.

265. All LECs provide facilities that support the interconnection arrangement from the manhole to the interconnector's space. Twelve LECs install the interconnector's cable from the manhole to the interconnector's space within the central office. The interconnector-customers of CBT, BellSouth, and Rochester install the cable from the manhole to the interconnector's space within the central office. The interconnector-customers of NYNEX's NYT install and maintain entrance facilities other than the cable vault. NYNEX's NET installs and maintains entrance facilities for the interconnectors.<sup>440</sup>

ii. Discussion

266. We analyze separately the entrance facility installation and space direct costs of the LECs that install the interconnector's cable and of LECs that do not provide this service because these two groups of LECs provide different services under the entrance facility function and their direct costs for this function are not comparable.

267. Entrance Facility Direct Costs of LECs that Provide Cable Installation. We

---

<sup>439</sup> *Designation Order*, 8 FCC Rcd at 6911.

<sup>440</sup> NYNEX does not, however, provide direct cost data for NET in TRP format in its direct case.

find that SWB's entrance facility installation and space direct costs for its highest-priced central offices, which are its large central offices, are unjust and unreasonable because they exceed one standard deviation above the industry average among LECs that provide cable installation and SWB fails to justify its high entrance facility direct costs. We order SWB to recalculate its rates for its highest-priced central offices to reflect entrance facility direct costs that do not exceed one standard deviation above the average and to provide refunds to its interconnector-customers based on the amount by which its entrance facility installation and space direct costs for these central offices exceeded the average plus one standard deviation for this function.

268. In calculating the overall average direct costs and the standard deviation relative to that average for the entrance installation and space function, we remove Lincoln's direct costs from the data because Lincoln recovers the costs of the labor and the materials that are actually used for the construction and the entrance facility installation at a particular central office for a particular interconnector.<sup>441</sup> Lincoln requires interconnectors to make an advance payment of \$7,500 for construction and entrance facility installation costs and bills the interconnector for an additional amount if these costs are greater than \$7,500 and it refunds the appropriate amount to the interconnector if these costs are less than \$7,500. The entrance facility, installation, and space direct costs of the other LECs in the data base are *ex ante* estimates of the average costs of providing this function at a particular central office or set of central offices. We do not believe that the average direct costs of the other LECs for this function can be compared to Lincoln's because interconnectors pay other LECs an amount equal to those LECs' average direct costs.

269. After making these adjustments, we find that the overall LEC average for the entrance facility and installation direct costs for this group of LECs is \$265 per month.<sup>442</sup> The standard deviation relative to that average is \$181 per month. The average plus one standard deviation is, therefore, \$446 per month.

270. SWB's entrance facility installation and space direct costs for its highest-priced central office are \$590 per month. These entrance facility installation and space direct costs are in excess of one standard deviation above the industry average and we find these costs to be unjust and unreasonable because SWB fails to justify its higher reported costs.

271. SWB generally discusses how it computes its tenant accommodation charge, which recovers entrance facility installation costs, common construction costs and security

---

<sup>441</sup> Lincoln partitions the \$7,500 advance payment between the construction provisioning function and the entrance facility installation function. Lincoln Direct Case, Appendix A.

<sup>442</sup> Nevada files no estimate of the number of labor hours required for entrance facility installation. We use an average of the number of labor hours estimated by other LECs that derive such an estimate, 17.33 hours, to calculate Nevada's direct cost for entrance facility and space.

installation costs.<sup>443</sup> SWB's discussion fails, however, to specifically address entrance facility costs. SWB briefly discusses its methodology for calculating its engineering design rate element, which also recovers costs for entrance facility installation, but fails to (1) identify facilities that require design, (2) identify the hourly labor rate, and (3) indicate the number of hours required for the design task.<sup>444</sup> Furthermore, SWB neither discusses nor offers cost support for the cable pull task. SWB only explains that it derives the conduit space rate element cost from company records of conduit additions and conduit costs, but offers no documentation to support this explanation.<sup>445</sup>

272. Accordingly, we disallow SWB's claimed entrance facility installation and space direct costs to the extent that these costs exceed \$446 per month. We order SWB to recalculate its rates to reflect this direct cost disallowance and to calculate the appropriate refunds based on the difference between the maximum allowable direct costs of \$446 and the direct costs that it recovered in the rates that it imposed on its interconnector-customers. In the event that elsewhere in this Order we make any disallowances to the SWB's direct costs for other reasons that affect the level of its entrance facility installation and space direct costs, \$446 per month is the maximum permissible level for its entrance facility installation and space direct costs and the full amount of those other disallowances must be reflected in the recalculated rates, even when the result of those other disallowances would bring its entrance facility installation and space direct costs below \$446.

273. Entrance Facility Direct Costs of LECs That Do Not Provide Cable Installation. For the group of LECs that do not offer cable installation, we are not using the standard of the average plus one standard deviation as a measure of reasonableness because it would justify an unreasonably high level of direct costs for this function. We find this to be the case for this group because the average entrance facility direct cost and the standard deviation do not properly describe the central tendency and the overall distribution of the data. The average entrance facility direct cost and the standard deviation for these LECs are \$1,040 per month and \$1,825 per month, respectively. The fact that the standard deviation is nearly twice the average demonstrates that these statistics are not useful for identifying the norm and should not be used to measure the reasonableness of these LECs' entrance facility direct costs. If we were to use the average plus one standard deviation to determine when to make disallowances for this group of LECs, we would allow LECs that do not provide cable installation to recover direct costs that are equal to \$2,865, more than six times the average plus one standard deviation for LECs that provide for cable installation. Furthermore, the median entrance facility direct cost for these LECs is \$150 per month. The large difference between the median and the average, which are both measures of the central tendency of the

---

<sup>443</sup> SWB Direct Case, Appendix 3.

<sup>444</sup> SWB Direct Case Appendix 2 at 2 and 4.

<sup>445</sup> *Id.*

data, also demonstrates that the use of the median would not assure reasonable results.<sup>446</sup>

274. We find that the entrance facility direct costs of those LECs that do not provide for cable installation should be lower than the entrance facility direct costs of LECs that do provide for cable installation because the latter group incurs additional costs for their installations.<sup>447</sup> For this reason, we adopt a different methodology for comparing the entrance facility direct costs of those LECs offering no cable installation. We nonetheless use the entrance facility direct costs of those LECs that provide installation of the interconnector's cable as a benchmark for evaluating the entrance facility direct costs of those LECs that do not provide cable installation. Rather than making disallowances for unsupported costs that are one standard deviation above the average costs for LECs in the latter category, however, we make disallowances when their entrance facility costs are above the average. This methodology recognizes that the entrance facility direct costs of a LEC that installs the interconnector's cable would be commensurately higher than the entrance facility direct costs of the same LEC if it did not install cable.

275. The average entrance facility installation and space direct cost for those LECs that install the interconnector's cable is \$265 per month. CBT's entrance facility direct costs for its area I, area II and area III offices are \$1,298, \$3,776, and \$2,294 per month, respectively.<sup>448</sup> We find, therefore, that CBT's entrance facility direct costs are unjust and unreasonable because they exceed the industry average direct cost of \$265, and CBT fails to justify its higher reported direct costs for this function. CBT lists the investment for entrance facility space and the annual cost factors that it applies to that investment to compute the entrance facility space costs.<sup>449</sup> CBT does not, however, explain the methodology, assumptions, and the data on which it develops the investment and the annual cost factors for this function.

276. We disallow the amount of CBT's direct costs that exceed \$265 per month. We order CBT to recalculate its rates to reflect this direct cost disallowance and to calculate

---

<sup>446</sup> If we were to use the average plus one standard deviation to make disallowances for this group of LECs, we would allow LECs that do not provide cable installation direct costs that are equal to \$2,865, an amount more than six times the average plus one standard deviation, \$446, that we calculated for the LECs that provide for cable installation.

<sup>447</sup> It should be noted that, based on the criteria that we use throughout our analysis for the other functions, we would not remove any LEC from the data base for this function because no LEC's entrance facility direct costs are greater than two standard deviations above the average for this function in relation to those LECs that do not provide for cable installation.

<sup>448</sup> We use the direct costs for CBT's area II offices in the data base because the area II offices have the highest overall price for physical collocation, and in those cases where a LEC develops separate direct costs for different central offices, we develop our data base using that LEC's highest priced central office.

<sup>449</sup> CBT Direct Case, Tab 3, Attachment B-1, Worksheets 8-9.

the refunds based on the difference between the maximum allowable direct cost of \$265 per month and the direct cost that CBT recovered in the rates it imposed on its interconnector-customers. In the event that elsewhere in this Order we make any disallowances to CBT's other direct costs for other reasons that affected the level of CBT's entrance facility direct costs, \$265 per month is the maximum permissible level for its entrance facility direct costs and refunds in the full amount of those other disallowances must be reflected in the recalculated rate, even when the result of those other disallowances would bring down CBT's entrance facility direct costs below \$265.

277. We also order NYNEX to provide cost data on TRP charts for entrance facility installation and entrance facility space functions for New England Telephone (NET) within 45 days of the release of this Order. NET installs and maintains the interconnector's cable. In its direct case, however, NYNEX does not file cost support data in TRP format for this activity for NET. We are, therefore, unable to determine the reasonableness of NET's direct cost for this function. We will review those data and determine whether NET's entrance facility direct costs for expanded interconnection are just and reasonable following our review of these data. NYNEX will be required to provide refunds to its interconnector-customers to the extent that it has recovered from those customers an unreasonable amount for its entrance facility and space direct costs.

### 3. Time and Materials Rates

#### a. Background

278. In the *Special Access Expanded Interconnection Order*, the Commission required that general terms and conditions for physical collocation be tariffed, and that the cross-connect element and any future contribution charge be provided pursuant to generally available tariffs at study area-wide averaged rates.<sup>450</sup> The *Special Access Expanded Interconnection Order* states that because these elements will be fairly standard, there is no need for the greater flexibility that would be possible with the use of individually negotiated tariff provisions.<sup>451</sup> It further states that while charges for certain other connection elements may reasonably differ by central office due to variations in cost, they should be uniform for all interconnectors in each individual office.<sup>452</sup> For physical collocation, these charges include labor and materials charges for initial preparation of office space.<sup>453</sup> The Commission noted that if different interconnectors use different amounts of space, seek arrangements requiring different amounts of time and materials for construction, or have different preferences

---

<sup>450</sup> *Special Access Expanded Interconnection Order*, 7 FCC Rcd at 7442.

<sup>451</sup> *Id.*

<sup>452</sup> *Id.*

<sup>453</sup> *Id.*

regarding installation, maintenance, and repair by LEC personnel, total charges will differ accordingly, but the unit charges should be uniform in each central office.<sup>454</sup>

279. On May 31, 1994, the Bureau released the *Supplemental Designation Order and Order to Show Cause*,<sup>455</sup> which designated issues to be investigated and directed certain LECs to file supplemental direct cases regarding their use of time and materials charges for central office construction for physical collocation. The Bureau determined in the *Supplemental Designation Order* that Bell Atlantic, Rochester, United, and Central -- i.e., LECs stating that they tariffed central office construction on a time and materials basis -- apparently misunderstood the Commission's discussion of time and materials charges in the *Special Access Expanded Interconnection Order*.<sup>456</sup> The Bureau found that these LECs had not tariffed time and materials charges on a per unit basis, as directed by the *Special Access Expanded Interconnection Order*.<sup>457</sup> According to the Bureau, these LECs stated that their rates were based on time and materials charges, but did not include particular charges in their tariffs, thereby implying that they would develop rates for construction in response to individual customer requests.<sup>458</sup> This led the Bureau to designate for investigation in the *Supplemental Designation Order* the issue of whether the foregoing LECs' approach to time and materials charges for central office construction is reasonable in light of the Commission's *Special Access Expanded Interconnection Order*.<sup>459</sup>

280. Specifically, the Bureau directed the foregoing LECs to: (1) explain how their approach to time and materials charges differs from the use of individual case basis rates; and (2) explain why they should not be required to provide time and materials charges through a "menu" of specific prices for different service components (for example rates for wire mesh cages; rates for wallboard cages or cages with or without air conditioning).<sup>460</sup> The Bureau also directed Bell Atlantic, United, and Central to describe their procedures for developing pre-construction estimates and submitting these estimates to interconnectors.<sup>461</sup> Bell Atlantic, United, and Central were also directed to address whether they should be required to limit to the pre-construction estimate, the amount they charge interconnectors; alternatively, they were

---

<sup>454</sup> *Id.*

<sup>455</sup> *Supplemental Designation Order*, 9 FCC Rcd 2742.

<sup>456</sup> *Id.* at 2745.

<sup>457</sup> *Id.*

<sup>458</sup> *Id.*

<sup>459</sup> *Id.*

<sup>460</sup> *Id.*

<sup>461</sup> *Id.*

asked to address whether LECs should be required to cap the amount they may charge interconnectors in excess of the pre-construction estimate, *e.g.*, 10 percent.<sup>462</sup> Finally, the Bureau noted that United and Central's tariff permits a "mutually agreed upon contractor selected by the Interconnector" to construct the cage.<sup>463</sup> The Bureau directed the parties to comment on the usefulness of this option in keeping LECs' cage construction charges just and reasonable, and United and Central were asked to provide details regarding this arrangement, such as the criteria used to approve contractors selected by interconnectors.<sup>464</sup>

281. The Bureau noted in the *Supplemental Designation Order* that United and Central retained a tariff provision that suggested they would develop rates for construction in response to individual customer requests, despite the *Physical Collocation Tariff Suspension Order*'s directive to delete all references to ICB pricing.<sup>465</sup> Accordingly, the Bureau issued an *Order to Show Cause*, together with the *Supplemental Designation Order*, ordering United and Central to show cause why they did not comply with the Bureau's *Physical Collocation Tariff Suspension Order* and why they should not be required to delete all references to ICB pricing in their expanded interconnection tariff.<sup>466</sup>

b. Discussion

282. As noted above, the *Special Access Expanded Interconnection Order* required that the cross-connect element and any future contribution charge be set in generally available tariffs at study area-wide averaged rates. We permitted, however, different charges for certain connection rate elements that reasonably differ by central office due to variations in costs. To account for these differences, LECs could charge interconnectors for labor and materials, provided that such charges appeared in a generally available tariff and are uniform for all interconnectors in the same central office.

283. In light of these requirements, we find that the construction rates for Rochester and Central are unjust and unreasonable<sup>467</sup> because these companies do not tariff either an average cost-based rate or a uniform per unit rate for the labor and the materials required for

---

<sup>462</sup> *Id.*

<sup>463</sup> *Id.*

<sup>464</sup> *Id.*

<sup>465</sup> *Id.*

<sup>466</sup> *Id.*

<sup>467</sup> We note that United also does not tariff either an average cost-based rate or a uniform per unit rate for the labor and the materials required for construction. Because United no longer offers physical collocation service and never had a physical collocation customer, we are not addressing the reasonableness of United's construction charges in this Order.

the construction (common construction and interconnector-specific construction) at each central office prior to the date on which the interconnector applies for expanded interconnection service.<sup>468</sup> Although Bell Atlantic tariffs a generally available rate for cage construction, it does not tariff either an average cost-based rate or uniform per unit labor and materials rates for the remainder of the central office construction prior to the application date for expanded interconnection. We find, therefore, that Bell Atlantic's construction rates are unjust and unreasonable to the extent that Bell Atlantic fails to tariff either uniform per unit labor and materials rates or an average cost-based rate.

284. We required LECs that used time and materials as a basis for assessing charges for construction to tariff these charges in order to ensure that interconnectors know the rate they will pay for the central office construction prior to the date on which the interconnector applies for expanded interconnection service. By failing to tariff the rates for time and materials on a per unit basis, as we explicitly required in the *Special Access Expanded Interconnection Order*, these LECs deny interconnectors notice of the full cost of physical collocation service prior to the date interconnectors apply for expanded interconnection service, and this uncertainty may serve as a barrier to entering the interstate access market. The absence of a tarified per unit rate for time and materials may interfere with the interconnectors' ability to implement their business plans and to market their access services. It may also increase the risk to the interconnectors' business, which would increase the price that the interconnector is required to pay to attract debt and equity capital to finance its business.

285. Elsewhere in this Order we prescribe central office construction rates for all other LECs. Because Bell Atlantic, Rochester, and Central file neither per unit time and materials rates nor cost support for such rates, we cannot find their central office construction rates to be reasonable. By failing to include per unit time and materials rates in their tariffs, or to submit cost support for such rates, as required explicitly in our orders, these LECs are able to impose central office construction charges on interconnectors without providing the information we need to determine the reasonableness of these charges. Accordingly, LECs may delay or prevent interconnectors from taking physical collocation service by consistently presenting interconnectors with estimates for central office construction that are not based on just and reasonable charges for the labor and the materials required for that construction.

286. Bell Atlantic, Rochester, United, and Central all argue that they are unable to

---

<sup>468</sup> LECs typically develop specific rates for a particular service that appear in generally available tariffs. Those rates are based on the average cost to provide that service. Individual case basis (ICB) rates are charges developed in response to each particular customer's request for a service and on the basis of the specific cost to provide that service to a particular customer. ICB rates are, therefore, a departure from normal practice and are usually reserved for unique or unusual common carrier services for which the carrier does not yet have sufficient experience to develop general rates. We require a carrier to convert ICB rates to average cost-based rates applicable to all customers once the carrier obtains sufficient knowledge about the cost of the service.

develop and tariff uniform per unit charges for labor and materials.<sup>469</sup> Rochester asserts that it lacks the experience or the data upon which to develop a menu of central office construction offerings.<sup>470</sup> We find that because all the other LECs have been able to develop average cost-based rates, it also should be possible for Bell Atlantic, Rochester, United, and Central to develop uniform per unit rates for labor and materials for each central office. Average costs are the product of per unit costs (*e.g.*, dollars per labor hour) and the number of units (*e.g.*, labor hours) required to provide a particular service function such as central office construction. In computing the average cost for central office construction, all the other LECs derive per unit costs. Moreover, these other LECs derive estimates of the number of labor hours and the amount of materials that are needed for central office construction. In fact, we believe that it may be easier to develop per unit labor and material rates than average cost-based rates because LECs must make estimates of the number of labor hours and the amount of materials needed for central office construction in developing the average cost-based rate.

287. Bell Atlantic states that it does not tariff generally available average, cost-based rates or uniform per unit charges for labor and materials for central office construction, because it uses outside contractors that do not publish price lists to prepare the central office for physical collocation.<sup>471</sup> This argument fails to explain, however, why Bell Atlantic is unwilling or unable to use contractors under long term arrangements at standard prices as it does for new service offerings other than physical collocation and for which it develops generally available average, cost-based rates.

288. Bell Atlantic, United, and Central argue that central office construction is not susceptible to average cost based tariffing or per unit labor and material tariffing because the cost of labor and the cost of materials needed for that construction vary over time.<sup>472</sup> We find this argument to be without merit because Bell Atlantic, United, and Central are free to file new tariffs with rate revisions whenever changes in the cost of labor and materials warrant such revisions.

289. Furthermore, Bell Atlantic, Rochester, United, and Central may choose to develop average, cost-based rates for central office construction. Therefore, if any of these LECs find themselves unable to develop and tariff uniform per unit charges on a time and materials basis, we require that they develop average cost-based rates for central office construction. Every LEC, other than Bell Atlantic, Rochester, United and Central, offers central office construction at generally available, tariffed rates developed on the basis of the

---

<sup>469</sup> Bell Atlantic Supplemental Direct Case at 2-4; Rochester Supplemental Direct Case at 2-4; United and Central Supplemental Direct Case at 2-4.

<sup>470</sup> Rochester Supplemental Direct Case at 3.

<sup>471</sup> Bell Atlantic Supplemental Direct Case at 3.

<sup>472</sup> Bell Atlantic Supplemental Direct Case at 4; United and Central Supplemental Direct Case at 3.

average cost of construction. There is nothing in the record that indicates that Bell Atlantic, Rochester, United, and Central face unique circumstances that would prevent them from developing rates based on average costs and they should, therefore, be able to calculate such rates.

290. Bell Atlantic, Rochester, and Central fail to tariff their time and materials charges, and the record contains no information on their central office construction rates or any cost support for the amounts they charge interconnectors for such construction.<sup>473</sup> We find, therefore, that they fail to meet their burden of proving that their rates for central office construction are just and reasonable. Because we have no information on their direct costs for central office construction, we prescribe maximum permitted rates for central office construction that are equal to the average cost for LECs in the central office construction sample plus one standard deviation.<sup>474</sup> We find that this methodology will produce just and reasonable rates for LECs that develop central office construction charges on the basis of time and materials costs because whether LECs develop their rates on the basis of averaged costs or on the basis of time and materials, the total costs for central office construction should be substantially the same.

291. We have no construction direct cost data for Bell Atlantic, Rochester, and Central and are unable to compare their direct costs with the overall average plus one standard deviation for this function. Accordingly, we order Bell Atlantic, Rochester, and Central to determine whether they charged interconnectors a rate that recovered construction direct costs in excess of \$1,125 per month, the industry average construction direct cost plus one standard deviation, and to calculate refunds payable to their interconnector-customers to the extent that they recovered such costs from these interconnectors in a dollar amount greater than that average plus one standard deviation. Bell Atlantic, Rochester, United, and Central must use the methodology set forth in Appendix C of this Order to determine whether their construction direct costs are in excess of the LEC industry construction direct cost average plus one standard deviation and must file completed tables identical in format to those described Appendix C, showing the calculation of these direct costs.

292. We also order Rochester to file tariff revisions reflecting either per unit labor and material rates that are uniform at each central office at which it offers physical collocation or generally available average-cost based rates for central office construction. This requirement does not apply to Bell Atlantic, United, and Central at the present time because they discontinued providing physical collocation service during the course of this tariff investigation.

---

<sup>473</sup> We need not, however, evaluate the reasonableness of United's construction charges because United never had a physical collocation customers in any of its central offices and it discontinued offering physical collocation service. See Letter from Warren D. Hannah, Director - Federal Relations, Sprint to William F. Caton, Secretary, FCC (dated December 7, 1995).

<sup>474</sup> See Section III.C.2.h *supra*.

293. Although the *Supplemental Designation Order* did not address Lincoln's approach to recovering the direct costs for construction and entrance facilities, we find that Lincoln's approach to recovering these costs does not fully comply with the tariffing requirements set forth in the *Special Access Expanded Interconnection Order*. Lincoln requires an advance payment of \$7,500 for the central office construction and for the provision of entrance facilities.<sup>475</sup> Lincoln bills the interconnector for additional costs if the total costs for these functions exceed \$7,500 and refunds money to the interconnector if the total costs are less than \$7,500. The interconnector, therefore, pays for the actual labor time and the actual materials used for entrance facility installation and construction, rather than paying an average charge that all interconnectors pay at a particular central office or set of central offices in a geographical area.

294. We find that Lincoln's approach to recovering the costs of construction and entrance facility functions violates the tariff filing requirements set forth in the *Special Access Expanded Interconnection Order*, because it does not differ from approaches taken by Bell Atlantic, Rochester, United, and Central to recover construction costs, except that Lincoln requires an advance payment. We therefore object to Lincoln's method of recovering the costs for central office construction and the provision of entrance facilities for the same reason that we object to the time and material construction approaches taken by Bell Atlantic, Rochester, United, and Central. We find that Lincoln's approach increases the uncertainty and the risk of the interconnector's business, provides an opportunity for Lincoln to engage in unreasonable discrimination among similarly situated interconnectors, and is a vehicle for delaying the implementation of physical collocation service.

295. Accordingly, we order Lincoln to revise its tariff to delete provisions that require interconnectors to pay \$7,500 for central office construction and entrance facility costs in advance and that require additional payments or refunds when Lincoln's central office construction direct costs are greater or less than that amount. We also direct Lincoln to file either per unit labor and material rates that are uniform at each central office at which it offers physical collocation or generally available average, cost-based rates for the construction and entrance facility functions. These tariffed rates must fully account for the entire amount of the costs for these two functions. Lincoln also must file cost data to support these tariff revisions in TRP format.

296. We cannot evaluate the reasonableness of the actual charges that Lincoln imposes on its interconnector-customers for construction and entrance facilities because Lincoln does not properly tariff per unit rates or average cost-based rates and does not file proper cost support data for these rates. We find, therefore, that Lincoln fails to meet its

---

<sup>475</sup> Lincoln partitions the \$7,500 advance payment under the construction provisioning function and the entrance facility installation functions. We collapse the construction provisioning function into a single construction function that also includes the interconnector-specific and the common construction functions, and we collapse the entrance facility installation function into a single entrance facility function that also includes the entrance facility space function.

burden of proving that its rates for central office construction and entrance facilities are just and reasonable. Given that we have no information on Lincoln's direct costs for central office construction, we are prescribing maximum rates for central office construction and entrance facilities. To do so, we use the same methodology that we apply to determine the reasonableness of the other LECs' generally available average, cost-based rates, *i.e.*, the overall LEC direct cost averages for construction and entrance facilities plus one standard deviation. We believe that this will produce just and reasonable rates for Lincoln's central office construction and entrance facility functions because whether Lincoln develops its rates on the basis of averaged costs or on the basis of time and materials, the total costs for central office construction or entrance facility should be substantially the same.

297. We lack complete construction direct cost data for Lincoln and are not able to compare its direct construction costs with the overall construction direct cost average plus one standard deviation. Accordingly, we direct Lincoln to determine whether it charged interconnectors a rate that recovered construction direct costs in excess of \$1,125 per month, the industry average construction direct cost plus one standard deviation, and to calculate refunds payable to its interconnector-customers to the extent that it recovered such costs from these interconnectors in a dollar amount greater than that average plus one standard deviation. Lincoln must use the methodology set forth in Appendix C of this Order to determine whether its construction direct costs are in excess of the LEC industry construction direct cost average plus one standard deviation and must file completed tables identical in format to those described in Appendix C that show the calculation of these direct costs. We also order Lincoln to file tariff revisions reflecting either per unit labor and materials rates that are uniform at each central office or rates that are based on the average cost of physical collocation construction for each central office where it offers physical collocation service.

298. Lincoln installs the interconnector's cable as a part of its entrance facility installation and space function. Therefore, we find that Lincoln's entrance facility rate should not exceed the overall LEC average plus one standard deviation for the entrance facility installation and space costs for LECs that install the interconnector's cable. The overall average plus one standard deviation for these LECs for this function is \$446 per month.<sup>476</sup> Because we lack complete entrance facility installation and space direct cost data for Lincoln, we are unable to compare its direct entrance facility installation and space costs with the overall entrance facility and space direct cost average plus one standard deviation. Accordingly, we direct Lincoln to determine whether it charged interconnectors a rate that recovered entrance facility installation and space direct costs in excess of \$446 per month, the average entrance facility and space direct cost plus one standard deviation for LECs that install the interconnector's cable, and to calculate refunds payable to its interconnector-customers to the extent that it recovered such costs from these interconnectors in a dollar amount greater than that average plus one standard deviation. Lincoln must use the methodology set forth in Appendix C of this Order to determine whether its entrance facility

---

<sup>476</sup> See Section III.C.2.i *supra*.

installation and space direct costs exceed the applicable LEC industry entrance facility installation and space direct cost average plus one standard deviation and must file completed tables identical in format to those described in Appendix C that show the calculation of these direct costs. We also order Lincoln to file tariff revisions reflecting either per unit labor and material rates that are uniform at each central office at which it offers physical collocation or generally available average cost-based rates for entrance facility installation and space for each central office at which it offers physical collocation service.

#### 4. TRP Data and Subsequent Direct Cost Adjustments

299. The direct cost prescriptions we are making in this Order are based on the cost data filed with this Commission between February 16, 1993, the date LECs filed their initial physical collocation tariffs and June 3, 1994, the last day we received cost data for physical collocation service in TRP format. We are limiting our review to cost data filed between these two dates because we rely on these TRP data to determine whether LECs' direct costs assigned to physical collocation service are just and reasonable. In the absence of these data, we cannot compare physical collocation direct costs among the LECs because different LECs use different rate structures, which creates difficulty in determining the physical collocation direct costs associated with particular rate elements.

300. We use the TRP data to create a comprehensive data base that permits a reasonable comparison of the direct costs of providing physical collocation service among LECs. The TRP data upon which we base our direct cost prescriptions in this Order are for those 14 LECs that either continue to provide physical collocation service or previously provided that service to at least one customer. We find that the TRP data filed in this proceeding are critical to our evaluation of the reasonableness of LECs' direct costs and will serve as a benchmark for examining the reasonableness of subsequent direct cost adjustments made by LECs that are a part of this investigation.

301. Accordingly, any direct cost disallowances that we are making in this Order apply to all tariff revisions filed after June 3, 1994 and before the effective date of this Order. That is, if a LEC that develops averaged direct costs for all of its central offices increased the amount of its claimed direct costs between June 4, 1994 and the effective date of this Order, we require that LEC to reduce its direct costs to an amount equal to the allowed direct costs that will take effect pursuant to this Order and to calculate refunds to interconnectors accordingly. The allowed direct costs that take effect pursuant to this Order shall include direct costs filed on TRP charts on or before June 3, 1994, for which we are either not making a disallowance or are making a disallowance for any reason.

302. Instead of developing average direct costs for all of their central offices, some LECs develop direct costs for different central offices. If any of these LECs increased their claimed direct costs for any central office for which the LEC had filed direct cost data on the TRP charts on or before June 3, 1994, the LEC must reduce those direct costs to an amount equal to the allowed direct costs that will take effect pursuant to this Order. These LECs

must also calculate refunds to interconnectors accordingly. For any of their offices for which direct cost data had not been included on the TRP charts on or before June 3, 1994, these same LECs must also revise any rate designed to recover direct costs of expanded interconnection in these offices to reflect any case-by-case direct cost disallowances that we are making to these LEC's direct costs in Section III.C.1 of this Order. Moreover, these LECs must determine whether the direct costs recovered in rates for expanded interconnection in these offices exceed the industry average plus one standard deviation. In making this determination, these LECs must use the methodology set forth in Appendix C of this Order and, if they recovered direct costs that exceed the average plus one standard deviation, they must revise any rate designed to recover direct costs of expanded interconnection in these offices to reflect direct costs that do not exceed this level and calculate refunds payable to any interconnector that paid the higher rate.

303. Although we find that LECs' physical collocation direct costs are reasonable to the extent that these costs are recalculated to reflect the direct cost disallowances that we make in this Order, LECs that wish to increase rates to reflect direct cost increases prospectively from the effective date this Order may file rate revisions at any time. Such filings must be accompanied by cost support information, including engineering studies, time and wage studies, or other cost studies that identify the direct costs of providing physical collocation service. Cost support must also include studies containing a projection of physical collocation costs for a representative 12 month period and workpapers that document the LEC's cost estimates. This cost support information must include direct cost data on TRP charts identical in format to the TRP charts developed by the Bureau in the *Designation Order* and for the same 14 physical collocation functions set forth in that Order.

#### **D. Overhead Loadings**

##### **1. Background**

304. Regulated physical collocation rates recover two types of costs: (1) direct costs; and (2) overhead costs. Direct costs are those that are attributable to physical collocation service. Overhead costs are joint and common costs that are not directly attributable to any particular service. An overhead loading is the dollar amount of the common and joint costs reflected in any particular rate. An overhead loading factor is the numerical value which yields the overhead cost or loading reflected in a rate when that factor is multiplied by the direct costs included in the same rate. For example, if a \$135 rate recovers \$100 of direct costs, the overhead costs included in that rate are \$35, and the overhead loading factor is 1.35. The overhead loading factor also indicates the size of the overhead costs relative to the direct costs reflected in a rate. The overhead costs included in the rate in this example are 35 percent as large as the direct costs included in that rate.

305. In the *Special Access Expanded Interconnection Order*, we required LECs to derive their connection charge rate levels from the direct costs of providing expanded

interconnection plus a reasonable level of overhead loadings.<sup>477</sup> We required the LECs to justify any deviations from uniform overhead loadings that they propose for connection charges.<sup>478</sup> We stated that if LECs propose connection charges that reflect fully distributed cost (FDC) overhead loadings, we would compare such loadings to the overhead loadings used for other services and require justification for any differences in overhead loadings.<sup>479</sup> We reaffirmed this standard for physical and virtual collocation in the *Virtual Collocation Order*.<sup>480</sup> We stated that, absent justification, LECs may not recover a greater share of overheads in charges for either physical or virtual collocation than they recover in charges for comparable services.<sup>481</sup> Moreover, we stated that LECs have the burden of demonstrating that their connection charges meet this overhead loading standard and are otherwise just, reasonable, and not unreasonably discriminatory.<sup>482</sup>

306. In the *Physical Collocation Tariff Suspension Order*, the Bureau found that although the LECs claimed that their overhead loading factors were derived from special access cost data, virtually none of them provided any information regarding loadings for particular special access services, such as DS1 and DS3 services.<sup>483</sup> According to the Bureau, LECs neither provided sufficient cost data to determine overhead loading factors for particular rates nor provided overhead loading ratios.<sup>484</sup> The Bureau, therefore, concluded that FDC overhead loading factors computed on the basis of 1992 special access ARMIS data would be the best currently available and verifiable surrogate factors for expanded interconnection.<sup>485</sup> The Bureau then calculated a rate adjustment factor to lower the LECs' rates to the extent they reflected an overhead factor greater than the ARMIS factor.<sup>486</sup> In the *Interim Overhead Order*, we affirmed the Bureau's *Physical Collocation Tariff Suspension Order* and concluded that the FDC overhead loading factors derived from ARMIS in the *Physical Collocation Tariff Suspension Order* continued to provide the best available, verifiable, and reasonable surrogate for the maximum overhead loading factors for expanded interconnection for the interim period

---

<sup>477</sup> *Special Access Expanded Interconnection Order*, 7 FCC Rcd at 7429.

<sup>478</sup> *Id.*

<sup>479</sup> *Id.*

<sup>480</sup> 9 FCC Rcd 5154.

<sup>481</sup> *Id.* at 5189.

<sup>482</sup> *Id.*

<sup>483</sup> *Physical Collocation Tariff Suspension Order*, 8 FCC Rcd at 4597.

<sup>484</sup> *Id.*

<sup>485</sup> *Id.*

<sup>486</sup> *Id.*